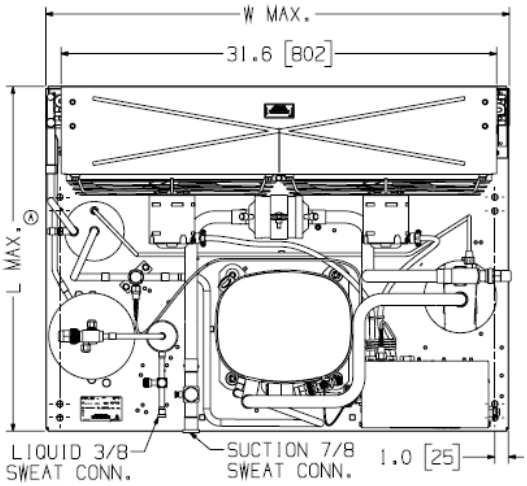
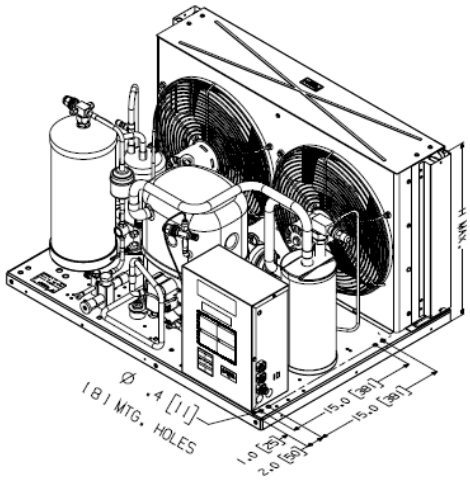
March 16, 2011

Tecumseh Compressor Company
Indoor Condensing Units

Model: AVA4544EXNXF **BoM: 2B3180-1** **R-22** **3.5 HP** **AIRCOOLED**





Model	Dimensions, inches				Line Connection*		Pumpdown	Air	Oil Ch	Gr. Wt.
	L	W	H	CH	Suction	Liquid	90 °F 90%	SCFM	Oz.	Lbs.
AVA4544EXNXF	25.0	33.5	19.5	16.0	7/8" S	3/8" S	20.93 lbs	1550	38.5	220
* F = Flare, S = Solder, RF or RS = Rotolock with Flare or Solder Connections, C = Compression Fitting										

		Ambient Temperatures											
Evaporator T		80°F			90°F			100°F			110°F		
°F	PSIG	BTUH	Watts	Cond T	BTUH	Watts	Cond T	BTUH	Watts	Cond T	BTUH	Watts	Cond T
10	32.8	23433	3088	94	21681	3161	103	19816	3243	112	17774	3340	122
15	37.7	26337	3255	94	24447	3348	104	22455	3448	114	20311	3560	123
20	43.0	29461	3422	97	27409	3537	106	25264	3656	115	22989	3783	125
25	48.8	32804	3592	99	30565	3727	108	28241	3866	117	25805	4009	126
30	54.8	36365	3762	99	33915	3919	109	31389	4078	119	28762	4238	128
35	61.5	40147	3934	101	37461	4112	111	34706	4291	121	31858	4470	130
40	68.5	44148	4108	103	41202	4307	113	38192	4507	123	35093	4706	132
45	76.0	48367	4283	105	45137	4504	115	41848	4725	125	38468	4944	134
50	84.0	52807	4461	107	49267	4702	117	45673	4944	127	41983	5186	136
55	92.6	57466	4639	111	53592	4902	120	49668	5166	129	45637	5431	138

60 Hz Performance

Return gas temp. 65°F, 5°F sub cooling

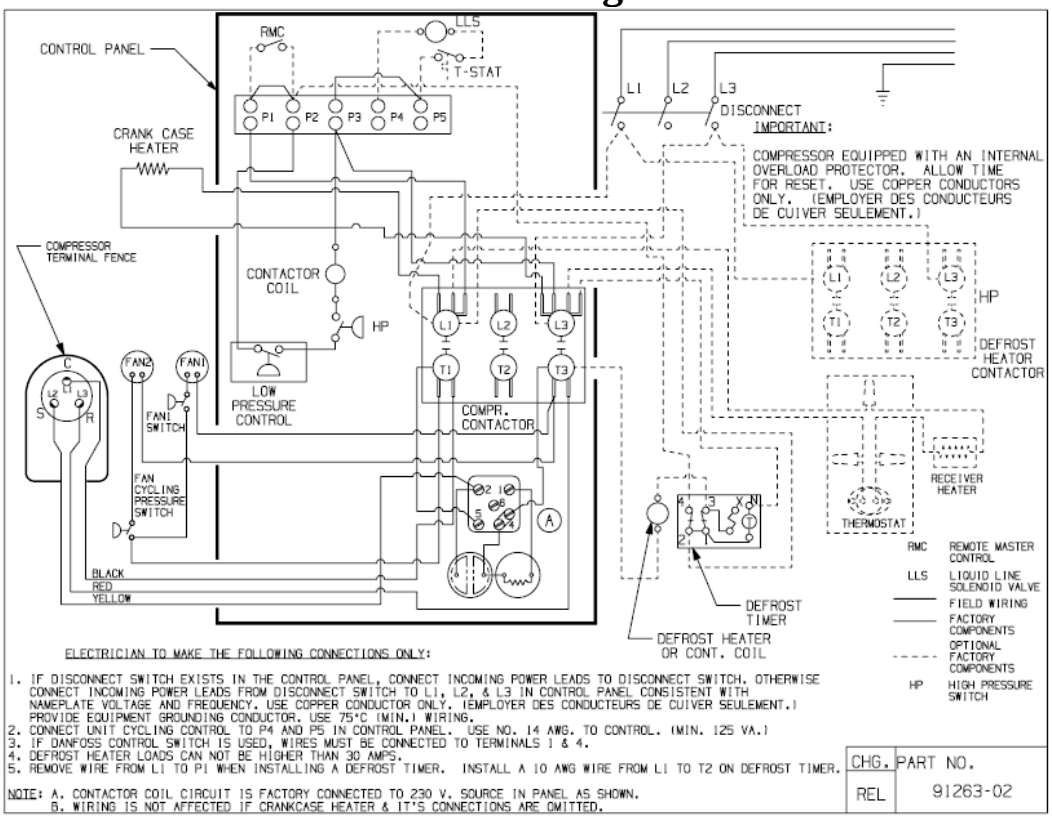
March 16, 2011

Specifications/ Parts:

Model	AVA4544EXNXF
Unit Bill of Material	2B3180-1
Nominal Volts-Hz-Ph	208-230-60-1
Refrigeration Range	20° to 55°F
Design Pressure Low	150
Design Pressure High	450
Voltage Range	187 to 254
Min. Circuit Ampacity	28.1
Max. Fuse Size (amps)	45
Compressor Model	AVA5542EXN
Comp. Bill of Material	AV144ET-001-P2
Compressor RLA/LRA	21.2 / 108.0
Overload	INTERNAL
Relay	820ARR3H46
Run Capacitor	85PR440F28
Run Capacitor Rating	40MFD 440V(M)VDE
Start Capacitor	85PS330D16
Start Capacitor Rating	130-156 MFD 330V VDE
Contactor	91013
Unit Drawing	DGU1920-37
Wiring Diagram	91263-02

Fan Motor	810F050C20 (2)
Fan Motor RLA	0.7 Each
Fan Blade	51568-1 (2)
Fan Guard	70831 (2)
Fan Shroud	70648-2
High Pressure Switch	84095-1
Low Pressure Control	84026-2
Oil Separator *	704-00002
Condenser	50858-1
Fan Switch	84096-1
Fan Switch	84096-2
Receiver Tank	51082-1
Liquid Valve	31592
Liquid Filter *	70081
Sight Glass *	70084
Suction Valve *	31529-1
Rotolock Valve Gasket	30233
Discharge Valve	56596
Suction Filter *	70082
Accumulator *	TK00042000
Crankcase Heater	90699
Defrost Timer *	N/A
Suction Shut Off Valve*	56500-K14
Liquid Shut Off Valve*	56500-K06
Shrader Valve Body*	56510
Valve Core*	56552
* = Equipped Units Only	

Electrical Diagram


CONTROL PANEL
RMC
LLS
T-STAT
P1 P2 P3 P4 P5
CRANK CASE HEATER
COMPRESSOR TERMINAL FENCE
CONTACTOR COIL
HP
LOW PRESSURE CONTROL
FAN2
FAN1
FAN1 SWITCH
FAN CYCLING PRESSURE SWITCH
COMPR. CONTACTOR
L1 L2 L3
DISCONNECT
IMPORTANT:
COMPRESSOR EQUIPPED WITH AN INTERNAL OVERLOAD PROTECTOR. ALLOW TIME FOR RESET. USE COPPER CONDUCTORS ONLY. (EMPLOYER DES CONDUCTEURS DE CUIVER SEULEMENT.)
T1 T2 T3
DEFROST HEATOR CONTACTOR
RECEIVER HEATER
THERMOSTAT
DEFROST TIMER
DEFROST HEATER OR CONT. COIL
BLACK
RED
YELLOW
RMC REMOTE MASTER CONTROL
LLS LIQUID LINE SOLENOID VALVE
FIELD WIRING
FACTORY COMPONENTS
OPTIONAL FACTORY COMPONENTS
HP HIGH PRESSURE SWITCH
ELECTRICIAN TO MAKE THE FOLLOWING CONNECTIONS ONLY:
1. IF DISCONNECT SWITCH EXISTS IN THE CONTROL PANEL, CONNECT INCOMING POWER LEADS TO DISCONNECT SWITCH. OTHERWISE CONNECT INCOMING POWER LEADS FROM DISCONNECT SWITCH TO L1, L2, & L3 IN CONTROL PANEL CONSISTENT WITH NAMEPLATE VOLTAGE AND FREQUENCY. USE COPPER CONDUCTOR ONLY. (EMPLOYER DES CONDUCTEURS DE CUIVER SEULEMENT.) PROVIDE EQUIPMENT GROUNDING CONDUCTOR. USE 75°C (MIN.) WIRING.
2. CONNECT UNIT CYCLING CONTROL TO P4 AND P5 IN CONTROL PANEL. USE NO. 14 AWG. TO CONTROL. (MIN. 125 VA.)
3. IF DANFOSS CONTROL SWITCH IS USED, WIRES MUST BE CONNECTED TO TERMINALS 1 & 4.
4. DEFROST HEATER LOADS CAN NOT BE HIGHER THAN 30 AMPS.
5. REMOVE WIRE FROM L1 TO P1 WHEN INSTALLING A DEFROST TIMER. INSTALL A 10 AWG WIRE FROM L1 TO T2 ON DEFROST TIMER.
NOTE: A. CONTACTOR COIL CIRCUIT IS FACTORY CONNECTED TO 230 V. SOURCE IN PANEL AS SHOWN.
B. WIRING IS NOT AFFECTED IF CRANKCASE HEATER & IT'S CONNECTIONS ARE OMITTED.
CHG. PART NO.
REL 91263-02